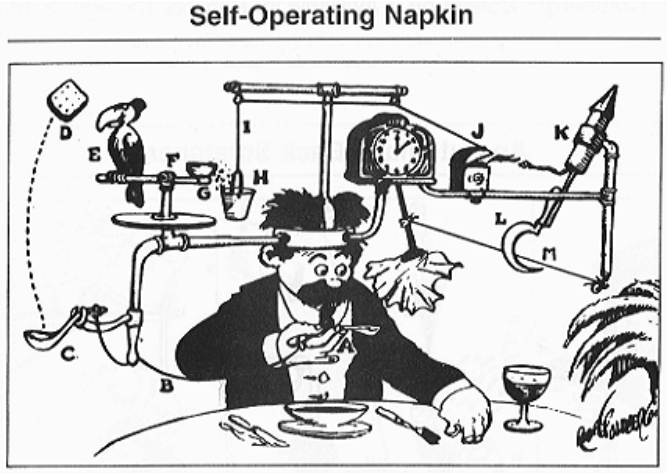
RUBE GOLDBERG ACTIVITY

WHAT IS IT?



Rube Goldberg was a cartoonist, who in the early-to-mid twentieth century drew a series of cartoons featuring fantastical machines, created by the fictional Professor Butts. These machines solved simple tasks, such as using a napkin or turning a page in a book, in the most unnecessarily complicated and witty ways. Now, students from middle school to undergraduates, participate in Rube Goldberg competitions, in which teams compete against each other to build the most innovative machines.

Professor Butts and the Self-Operating Napkin (1931). Soup spoon (A) is raised to mouth, pulling string (B) and thereby jerking ladle (C), which throws cracker (D) past tucan (E). Tucan jumps after cracker and perch (F) tilts, upsetting seeds (G) into pail (H). Extra weight in pail pulls cord (I), which opens and ignites lighter (J), setting off skyrocket (K), which causes sickle (L) to cut string (M), allowing pendulum with attached napkin to swing back and forth, thereby wiping chin.

YOUR MISSION FOR TODAY

- Your mission for today is to build a Rube Goldberg machine that presses the space bar on the keyboard on your table.
- Your machine should include at least three transfers of energy. For example, a weight hitting a ball that rolls down a ramp is one transfer of energy step.
- You can use any materials you find on the supplies table.
- At the conclusion of building, and we'll all circulate around and see each team's machine in action.
- Your machine can include only one human intervention, which means you can only touch the machine once when demonstrating it.

What does this have to do with teaching?

Certainly this type of activity can support students' learning about scientific concepts, such as simple machines, forms of energy, and forces and motion. Teachers can also leverage this type of activity to help students practice their disciplinary vocabulary and communication skills. It can be useful as a way to help students develop problem solving skills, collaboration, and creativity.

As you participate in this activity, think about how the process of creating the machines makes you feel? Do you enjoy the problem solving? How did you handle failures related to your machine? What did you do to facilitate positive interactions in your group?